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EXAMINER

WILLIAMS, JOSEPH L

ART UNIT PAPER NUMBER

2879

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/752,018

Applicant(s)

BADER ET AL.

Examiner

Joseph L. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/11/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The amendment filed on 11 March 2004 has been entered.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- are rejected under 35 U.S.C. 102(b) as being anticipated by Antonis et al. (WO 97/23895), of record by Applicant.

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Regarding claim 1, Antonis ('895) teaches in figure 1 and page 5, line 12 through page 6, line 17 an electrodeless low-pressure discharge lamp (10) comprising a discharge vessel enclosing a gas-tight discharge cavity containing an ionizable fill the discharge vessel having a light-transmitting bulb portion (no number) and a reentrant tube (11) protruding into the discharge cavity, the bulb portion and the reentrant tube each having a surface facing to the discharge cavity; a means arranged at least partially in the reentrant tube for exciting discharge in the ionizable fill; an UV-to-visible-converting layer (17) applied only to the surface of the bulb portion; and an UV reflecting layer (17) applied to the surface of the reentrant tube, the surface of the bulb portion being free of the UV reflecting layer (see page 6, lines 16-17. The Examiner is interpreting the reference to disclose that only the part of layer (17) on the reentrant

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tube (11) is replaced by a UV reflecting layer and not the entire layer (17) which would include the bulb surface).

Regarding claim 8, Antonis ('895) teaches in figure 1 and page 5, line 12 through page 6, line 17 an electrodeless low-pressure discharge lamp comprising a discharge vessel enclosing a gas-tight discharge cavity containing an ionizable fill, the discharge vessel having a light-transmitting bulb portion and a reentrant tube protruding into the discharge cavity, the bulb portion and the reentrant tube each having a surface facing to the discharge cavity; a means arranged at least partially in the reentrant tube for exciting discharge in the ionizable fill; an UV to visible converting layer applied to the surface of the bulb portion; and an UV reflecting layer applied to the surface of the reentrant tube, the an surface of the reentrant tube being free of said UV-to-visible-converting layer.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonis et al. (WO 97/23895) in view of Willibrordus et al. (US 5,514,932), both of record.

Regarding claim 2, Antonis ('895) teaches all of the claimed limitations except for explicitly teaching the supply electronics surrounded by a housing.

Further regarding claim 2, Willibrordus ('932) teaches the means for exciting discharge in the ionizable fill comprises a supply electronics (141) surrounded by a housing (140) and connected to a coil (130) for the purpose of maintaining the electric discharge of the lamp.

Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the supply electronics of Willibrordus in the lamp of Antonis for the purpose of maintaining the electric discharge of the lamp.

Regarding claim 3, Willibrordus ('932) teaches the UV-to-visible-converting layer comprises at least one phosphor layer activated by at least one rare earth element (column 4, lines 45-49).

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The reason for combining is the same as for claim 2 above.

Regarding claim 4, Willibrordus ('932) teaches the UV reflecting layer is made of one of  $\text{Al}_2\text{O}_3$ .

The reason for combining is the same as for claim 2 above.

Regarding claim 5, Willibrordus ('932) does not explicitly teach the UV reflecting layer having a coating weight resulting in a reflection coefficient of at least 0.7.

However, because teaches Willibrordus ('932) teaches the coating weight of the reflective layer be  $5 \text{ mg/cm}^2$  or less, which is greater than the Applicant's coating weight of  $4.5 \text{ mg/cm}^2$ , the Examiner infers that because Willibrordus ('932) teaches the same

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reflector material and coating weight as that of the instant Application, the reflection coefficient of the reflective layer of Willibrordus ('932) is at least 0.7.

The reason for combining is the same as for claim 2 above.

Regarding claim 6, and similar to the argument presented above, Willibrordus ('932) teaches the UV reflecting layer having a coating weight resulting in a reflection coefficient of at least 0.9.

The reason for combining is the same as for claim 2 above.

Regarding claim 7, Willibrordus ('932) teaches the fill comprises mercury and an inert gas, the UV-to-visible converting layer can be a tri-phosphor layer and the UV reflecting layer is of aluminum oxide and a coating weight of less than  $5 \text{ mg/cm}^2$  which includes that claimed  $4.5 \text{ mg/cm}^2$ .

The reason for combining is the same as for claim 2 above.

Regarding claim 9, Antonis ('895) teaches all of the claimed limitations except for explicitly teaching the supply electronics surrounded by a housing.

Further regarding claim 9, Willibrordus ('932) teaches the means for exciting discharge in the ionizable fill comprises a supply electronics (141) surrounded by a housing (140) and connected to a coil (130) for the purpose of maintaining the electric discharge of the lamp.

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Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the supply electronics of Willibrordus in the lamp of Antonis for the purpose of maintaining the electric discharge of the lamp.

Regarding claim 10, Willibrordus ('932) teaches the UV-to-visible-converting layer comprises at least one phosphor layer activated by at least one rare earth element (column 4, lines 45-49).

The reason for combining is the same as for claim 9 above.

Regarding claim 11, Willibrordus ('932) teaches the UV reflecting layer is made of one of  $\text{Al}_2\text{O}_3$ .

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The reason for combining is the same as for claim 9 above.

Regarding claim 12, Willibrordus ('932) does not explicitly teach the UV reflecting layer having a coating weight resulting in a reflection coefficient of at least 0.7.

However, because Willibrordus ('932) teaches the coating weight of the reflective layer be  $5 \text{ mg/cm}^2$  or less, which is greater than the Applicant's coating weight of  $4.5 \text{ mg/cm}^2$ , the Examiner infers that because Willibrordus ('932) teaches the same reflector material and coating weight as that of the instant Application, the reflection coefficient of the reflective layer of Willibrordus ('932) is at least 0.7.

The reason for combining is the same as for claim 9 above.

Regarding claim 13, and similar to the argument presented above, Willibrordus ('932) teaches the UV reflecting layer having a coating weight resulting in a reflection coefficient of at least 0.9.

The reason for combining is the same as for claim 9 above.

Regarding claim 14, Willibrordus ('932) teaches the fill comprises mercury and an inert gas, the UV-to-visible converting layer can be a tri-phosphor layer and the UV reflecting layer is of aluminum oxide and a coating weight of less than 5 mg/cm<sup>2</sup> which includes that claimed 4.5 mg/cm<sup>2</sup>.

The reason for combining is the same as for claim 9 above.

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### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 11 March 2004 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

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**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Williams  
Examiner  
Art Unit 2879